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SEQUENCE LISTING

<110> Jackson, W.
Harris, A.

<120> NEISSERIA MENINGITIDIS POLYPEPTIDE, NUCLEIC ACID SEQUENCE AND USES THEREOF

<130> 7969-083

<140> 09/388,089
<141> 1999-08-31

<160> 20

<170> PatentIn Ver. 2.0

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<212> DNA
<213> Neisseria meningitidis

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aacagcgtga ccgccggcnt cgtgtccgcc aaaggcagaa gcctgcccaa cgaaagctac 540
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aacttaaaag gacaggtcgt cggcatcaac tcgcaaatat acagccgcag cggcggattc 660
atgggcattt ccttcgccat cccgattgac gttgccatga atgtcgccga acagctgaaa 720
aacaccggca aagtccaacg cggacaactg ggcgtgatta ttcaagaagt atcctacggt 780
ttggcacaat cgttcggttt ggacaaagcc ggcggcgcac tgattgccaa aatcctgccc 840
ggcagccccg cagaacgtgc cggcctgcgg gcgggcgaca tcgtcctcag cctcgacggc 900
ggagaaatac gttcttccgg cgaccttccc gttatggtcg gcgccattac gccgggaaaa 960
gaagtcagcc tcggcgtatg gcgcaaaggc gaagaaatca caatcaaagt caagctgggc 1020
aacgccgccg agcatatcgg cgcatcatcc aaaacagatg aagccccta caccgaacag 1080
caatccggta cgttctcggt cgaatccgca ggcattaccc ttcagacaca taccgacagc 1140
agcggcggac acctcgtcgt cgtacgggtt tccgacgcgg cagaacgcgc aggcttgagg 1200
cgcggcgacg aaattcttgc cgtcgggcaa gtccccgtca atgacgaagc cggtttccgc 1260
aaagctatgg acaaggcagg caaaaacgtc cccctgctga tcatgcgccg tggcaacacg 1320
ctgtttatcg cattaaacct gcaataa 1347

<210> 2
<211> 447
<212> PRT
<213> Neisseria spp.

<400> 2

Met Leu Leu Pro Asp Phe Val Gln Leu Val Gln Ser Glu Gly Pro Ala
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Val Val Asn Ile Gln Ala Ala Pro Ala Pro Arg Thr Gln Asn Gly Ser
20 25 30

Ser Asn Ala Glu Thr Asp Ser Asp Pro Leu Ala Asp Ser Asp Pro Phe
35 40 45

Tyr Glu Phe Phe Lys Arg Leu Val Pro Asn Met Pro Glu Ile Pro Gln
50 55 60

Glu Glu Ala Asp Asp Gly Gly Leu Asn Phe Gly Ser Gly Phe Ile Ile
65 70 75 80

Ser Lys Asp Gly Tyr Ile Leu Thr Asn Thr His Val Val Thr Gly Met
85 90 95

Gly Ser Ile Lys Val Leu Leu Asn Asp Lys Arg Glu Tyr Thr Ala Lys
100 105 110

Leu Ile Gly Ser Asp Val Gln Ser Asp Val Ala Leu Leu Lys Ile Asp
115 120 125

Ala Thr Glu Glu Leu Pro Val Val Lys Ile Gly Asn Pro Lys Asp Leu
130 135 140

Lys Pro Gly Glu Trp Val Ala Ala Ile Gly Ala Pro Phe Gly Phe Asp
145 150 155 160

Asn Ser Val Thr Ala Gly Val Ser Ala Lys Gly Arg Ser Leu Pro Asn
165 170 175

Glu Ser Tyr Thr Pro Phe Ile Gln Thr Asp Val Ala Ile Asn Pro Gly
180 185 190

Asn Ser Gly Gly Pro Leu Phe Asn Leu Lys Gly Gln Val Val Gly Ile
195 200 205

Asn Ser Gln Ile Tyr Ser Arg Ser Gly Gly Phe Met Gly Ile Ser Phe
210 215 220

Ala Ile Pro Ile Asp Val Ala Met Asn Val Ala Glu Gln Leu Lys Asn
225 230 235 240

Thr Gly Lys Val Gln Arg Gly Gln Leu Gly Val Ile Ile Gln Glu Val
245 250 255

Ser Tyr Gly Leu Ala Gln Ser Phe Gly Leu Asp Lys Ala Gly Gly Ala
260 265 270

Leu Ile Ala Lys Ile Leu Pro Gly Ser Pro Ala Glu Arg Ala Gly Leu
275 280 285

Arg Ala Gly Asp Ile Val Leu Ser Leu Asp Gly Gly Glu Ile Arg Ser
290 295 300

Ser Gly Asp Leu Pro Val Met Val Gly Ala Ile Thr Pro Gly Lys Glu
305 310 315 320

Val Ser Leu Gly Val Trp Arg Lys Gly Glu Glu Ile Thr Ile Lys Val
325 330 335

Lys Leu Gly Asn Ala Ala Glu His Ile Gly Ala Ser Ser Lys Thr Asp
340 345 350

Glu Ala Pro Tyr Thr Glu Gln Gln Ser Gly Thr Phe Ser Val Glu Ser
355 360 365

Ala Gly Ile Thr Leu Gln Thr His Thr Asp Ser Ser Gly Gly His Leu
370 375 380

Val Val Val Arg Val Ser Asp Ala Ala Glu Arg Ala Gly Leu Arg Arg
385 390 395 400

Gly Asp Glu Ile Leu Ala Val Gly Gln Val Pro Val Asn Asp Glu Ala
405 410 415

Gly Phe Arg Lys Ala Met Asp Lys Ala Gly Lys Asn Val Pro Leu Leu
420 425 430

Ile Met Arg Arg Gly Asn Thr Leu Phe Ile Ala Leu Asn Leu Gln
435 440 445

<210> 3
<211> 49
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

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<210> 4
<211> 54
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 4
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<210> 5
<211> 6
<212> PRT
<213> Neisseria meningitidis

<400> 5
Leu Thr Asn Thr His Val
1 5

<210> 6
<211> 5
<212> PRT
<213> Neisseria meningitidis

<400> 6
Ser Asp Val Ala Leu
1 5

<210> 7
<211> 7
<212> PRT
<213> Neisseria meningitidis

<400> 7
Gly Asn Ser Gly Gly Pro Leu
1 5

<210> 8
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 8
atgctgctgc ccgactttgt ccaagttcaa 30

<210> 9
<211> 30
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 9
gaagcccgaa ccgaagttca atccgccgtc 30

<210> 10
<211> 1395
<212> DNA
<213> Neisseria meningitidis

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tgcgaaaagg ccggcagctt tttcggtgcg gacaaaaaag aagcatcctt cgtagaacgc 120
atcgaacaca ccaaagacga cggcagtgtc agtatgctgc tgcccgactt tgcccaactg 180
gttcaaagcg aaggcccggc agtcgtcaat attcaggcag cccccgcccc gcgcacccaa 240
aacggcagcg gcaatgccga aaccgattcc gacccgcttg ccgacagcga cccgttctac 300

gaatttttca aacgcctcgt cccgaacatg cccgaaatcc cccaagaaga agcagatgac 360
ggcggattga acttcggttc gggcttcatc atcagcaaaa acggctacat cctgaccaat 420
acccacgtcg ttgccggtat gggcagtatc aaagtcctgc tcaacgacaa gcgcgaatat 480
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gccaaaggca gaagcctgcc caacgaaagc tacacaccct tcatccaaac cgacgttgcc 720
atcaatccgg gcaattccgg cggcccgctg ttcaacttaa aaggacaggt cgtcggcatc 780
aattcgcaaa tatacagccg cagcggcgga ttcatgggca tctcctttgc catcccgatt 840
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gcaagtcccc gtcaa 1395

<210> 11
<211> 498
<212> PRT
<213> Neisseria meningitidis

<400> 11
Val Phe Lys Lys Tyr Gln Tyr Leu Ala Leu Ala Ala Leu Cys Ala Ala
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Ser Leu Ala Gly Cys Asp Lys Ala Gly Ser Phe Phe Gly Ala Asp Lys
20 25 30

Lys Glu Ala Ser Phe Val Glu Arg Ile Lys His Thr Lys Asp Asp Gly
35 40 45

Ser Val Ser Met Leu Leu Pro Asp Phe Val Gln Leu Val Gln Ser Glu
50 55 60

Gly Pro Ala Val Val Asn Ile Gln Ala Ala Pro Ala Pro Arg Thr Gln
65 70 75 80

Asn Gly Ser Ser Asn Ala Glu Thr Asp Ser Asp Pro Leu Ala Asp Ser
85 90 95

Asp Pro Phe Tyr Glu Phe Phe Lys Arg Leu Val Pro Asn Met Pro Glu
100 105 110

Ile Pro Gln Glu Glu Ala Asp Asp Gly Gly Leu Asn Phe Gly Ser Gly
115 120 125

Phe Ile Ile Ser Lys Asp Gly Tyr Ile Leu Thr Asn Thr His Val Val
130 135 140

Thr Gly Met Gly Ser Ile Lys Val Leu Leu Asn Asp Lys Arg Glu Tyr
145 150 155 160

Thr Ala Lys Leu Ile Gly Ser Asp Val Gln Ser Asp Val Ala Leu Leu
165 170 175

Lys Ile Asp Ala Thr Glu Glu Leu Pro Val Val Lys Ile Gly Asn Pro
180 185 190

Lys Asp Leu Lys Pro Gly Glu Trp Val Ala Ala Ile Gly Ala Pro Phe
195 200 205

Gly Phe Asp Asn Ser Val Thr Ala Gly Val Ser Ala Lys Gly Arg Ser
210 215 220

Leu Pro Asn Glu Ser Tyr Thr Pro Phe Ile Gln Thr Asp Val Ala Ile
225 230 235 240

Asn Pro Gly Asn Ser Gly Gly Pro Leu Phe Asn Leu Lys Gly Gln Val
245 250 255

Val Gly Ile Asn Ser Gln Ile Tyr Ser Arg Ser Gly Gly Phe Met Gly
260 265 270

Ile Ser Phe Ala Ile Pro Ile Asp Val Ala Met Asn Val Ala Glu Gln
275 280 285

Leu Lys Asn Thr Gly Lys Val Gln Arg Gly Gln Leu Gly Val Ile Ile
290 295 300

Gln Glu Val Ser Tyr Gly Leu Ala Gln Ser Phe Gly Leu Asp Lys Ala
305 310 315 320

Gly Gly Ala Leu Ile Ala Lys Ile Leu Pro Gly Ser Pro Ala Glu Arg
325 330 335

Ala Gly Leu Arg Ala Gly Asp Ile Val Leu Ser Leu Asp Gly Gly Glu
340 345 350

Ile Arg Ser Ser Gly Asp Leu Pro Val Met Val Gly Ala Ile Thr Pro
355 360 365

Gly Lys Glu Val Ser Leu Gly Val Trp Arg Lys Gly Glu Glu Ile Thr
370 375 380

Ile Lys Val Lys Leu Gly Asn Ala Ala Glu His Ile Gly Ala Ser Ser
385 390 395 400

Lys Thr Asp Glu Ala Pro Tyr Thr Glu Gln Gln Ser Gly Thr Phe Ser
405 410 415

Val Glu Ser Ala Gly Ile Thr Leu Gln Thr His Thr Asp Ser Ser Gly
420 425 430

Gly His Leu Val Val Val Arg Val Ser Asp Ala Ala Glu Arg Ala Gly
435 440 445

Leu Arg Arg Gly Asp Glu Ile Leu Ala Val Gly Gln Val Pro Val Asn
450 455 460

Asp Glu Ala Gly Phe Arg Lys Ala Met Asp Lys Ala Gly Lys Asn Val
465 470 475 480

Pro Leu Leu Ile Met Arg Arg Gly Asn Thr Leu Phe Ile Ala Leu Asn
485 490 495

Leu Gln

<210> 12
<211> 475
<212> PRT
<213> Neisseria meningitidis

<400> 12
Ala Gly Ser Phe Phe Gly Ala Asp Lys Lys Glu Ala Ser Phe Val Glu
1 5 10 15

Arg Ile Lys His Thr Lys Asp Asp Gly Ser Val Ser Met Leu Leu Pro
20 25 30

Asp Phe Val Gln Leu Val Gln Ser Glu Gly Pro Ala Val Val Asn Ile
35 40 45

Gln Ala Ala Pro Ala Pro Arg Thr Gln Asn Gly Ser Ser Asn Ala Glu
50 55 60

Thr Asp Ser Asp Pro Leu Ala Asp Ser Asp Pro Phe Tyr Glu Phe Phe
65 70 75 80

Lys Arg Leu Val Pro Asn Met Pro Glu Ile Pro Gln Glu Glu Ala Asp
85 90 95

Asp Gly Gly Leu Asn Phe Gly Ser Gly Phe Ile Ile Ser Lys Asp Gly
100 105 110

Tyr Ile Leu Thr Asn Thr His Val Val Thr Gly Met Gly Ser Ile Lys
115 120 125

Val Leu Leu Asn Asp Lys Arg Glu Tyr Thr Ala Lys Leu Ile Gly Ser
130 135 140

Asp Val Gln Ser Asp Val Ala Leu Leu Lys Ile Asp Ala Thr Glu Glu
145 150 155 160

Leu Pro Val Val Lys Ile Gly Asn Pro Lys Asp Leu Lys Pro Gly Glu
165 170 175

Trp Val Ala Ala Ile Gly Ala Pro Phe Gly Phe Asp Asn Ser Val Thr
180 185 190

Ala Gly Val Ser Ala Lys Gly Arg Ser Leu Pro Asn Glu Ser Tyr Thr
195 200 205

Pro Phe Ile Gln Thr Asp Val Ala Ile Asn Pro Gly Asn Ser Gly Gly
210 215 220

Pro Leu Phe Asn Leu Lys Gly Gln Val Val Gly Ile Asn Ser Gln Ile
225 230 235 240

Tyr Ser Arg Ser Gly Gly Phe Met Gly Ile Ser Phe Ala Ile Pro Ile
245 250 255

Asp Val Ala Met Asn Val Ala Glu Gln Leu Lys Asn Thr Gly Lys Val
260 265 270

Gln Arg Gly Gln Leu Gly Val Ile Ile Gln Glu Val Ser Tyr Gly Leu
275 280 285

Ala Gln Ser Phe Gly Leu Asp Lys Ala Gly Gly Ala Leu Ile Ala Lys
290 295 300

Ile Leu Pro Gly Ser Pro Ala Glu Arg Ala Gly Leu Arg Ala Gly Asp
305 310 315 320

Ile Val Leu Ser Leu Asp Gly Gly Glu Ile Arg Ser Ser Gly Asp Leu
325 330 335

Pro Val Met Val Gly Ala Ile Thr Pro Gly Lys Glu Val Ser Leu Gly
340 345 350

Val Trp Arg Lys Gly Glu Glu Ile Thr Ile Lys Val Lys Leu Gly Asn
355 360 365

Ala Ala Glu His Ile Gly Ala Ser Ser Lys Thr Asp Glu Ala Pro Tyr
370 375 380

Thr Glu Gln Gln Ser Gly Thr Phe Ser Val Glu Ser Ala Gly Ile Thr
385 390 395 400

Leu Gln Thr His Thr Asp Ser Ser Gly Gly His Leu Val Val Val Arg
405 410 415

Val Ser Asp Ala Ala Glu Arg Ala Gly Leu Arg Arg Gly Asp Glu Ile
420 425 430

Leu Ala Val Gly Gln Val Pro Val Asn Asp Glu Ala Gly Phe Arg Lys
435 440 445

Ala Met Asp Lys Ala Gly Lys Asn Val Pro Leu Leu Ile Met Arg Arg
450 455 460

Gly Asn Thr Leu Phe Ile Ala Leu Asn Leu Gln
465 470 475

<210> 13
<211> 1326
<212> DNA
<213> Neisseria meningitidis

<400> 13
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gaaggcccgg cagtcgtcaa tattcaggca gcccccgccc cgcgcaccca aaacggcagc 180
ggcaatgccg aaaccgattc cgacccgctt gccgacagcg acccgttcta cgaatttttc 240
aaacgcctcg tcccgaacat gcccgaaatc ccccaagaag aagcagatga cggcggattg 300
aacttcggtt cgggcttcat catcagcaaa aacggctaca tcctgaccaa tacccacgtc 360

gttgccggta tgggcagtat caaagtcctg ctcaacgaca agcgcgaata taccgccaaa 420
ctcatcggtt cggatgtcca atccgatgtc gcccttctga aaatcgacgc aacggaagag 480
ctacccgtcg tcaaaatcgg caatcccaaa aatttgaaac cgggcgaatg ggtcgctgcc 540
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atatacagcc gcagcggcgg attcatgggc atctcctttg ccatcccgat tgacgttgcc 780
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gcattgattg ccaaaatcct tcccggcagc cccgcagaac gtgccggcct gcaggcgggc 960
gacatcgtcc tcagcctcga cggcggagaa atacgttctt ccggcgacct tcccgtcatg 1020
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atcacaatca aagccaagct gggcaacgcc gccgagcata ccggcgcatc atccaaaaca 1140
gatgaagccc cctacaccga acagcaatcc ggtacgttct cggtcgaatc cgcaggcatt 1200
acccttcaga cacataccga cagcagcggc aaacacctcg tcgtcgtacg ggtttccgac 1260
gcggcagaac gcgcaggctt aaggcacggc gacgaaatcc tagccgtcag ggcaagtccc 1320
cgtcaa 1326

<210> 14
<211> 42
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 14
attacgcaga ggaccatggc cggcagcttt ttcggtgcgg ac 42

<210> 15
<211> 47
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 15
attacgcaga ggttctagac cttgcaggtt taatgcgata aacagcg 47

<210> 16
<211> 51
<212> PRT
<213> Neisseria meningitidis

<400> 16
Val Phe Lys Lys Tyr Gln Tyr Leu Ala Leu Ala Ala Leu Cys Ala Ala
1 5 10 15

Ser Leu Ala Gly Cys Asp Lys Ala Gly Ser Phe Phe Gly Ala Asp Lys
20 25 30

Lys Glu Ala Ser Phe Val Glu Arg Ile Lys His Thr Lys Asp Asp Gly
35 40 45

Ser Val Ser
50

<210> 17
<211> 153
<212> DNA
<213> Neisseria meningitidis

<400> 17
gtgttcaaaa ataccaata cctcgctttg gcagcactgt gtgccgcctc gctggcaggc 60
tgcgacaaag ccggcagctt tttcggtgcg gacaaaaaag aagcatcctt tgtagaacgc 120
atcaaacaca ccaaagacga cggcagcgtc agt 153

<210> 18
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 18
gtgttcaaaa ataccaata cctc 24

<210> 19
<211> 24
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 19
actgacgctg ccgtcgtctt tggt 24

<210> 20
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Primer

<400> 20
ttgcaggttt aatgcgataa acagcgt 27